

CLAIMS

1. A method of determining a state of a service, the service being composed of network components, and the service affecting operation of a business process, the method comprising determining a state of one or more of the network components.

2. The method of claim 1, comprising correlating the states of the network components, of which the service is composed, to determine a net state at a designated time of the service.

3. The method of claim 2, wherein the net state of the service includes an intended or scheduled state degradation.

4. A method of monitoring a state of a service, the service being composed of components of a network, and the service affecting operation of a business process, the method comprising:

monitoring the network components to determine the state of the service, and when the state of the service is degraded, determining a cause of the degraded service by performing one or more of:

testing the components,
querying a database,
modifying the components, and
implementing a reasoning algorithm.

5. A method of monitoring a state of a service defined by service parameters, wherein the service is composed of network components and the service affects operation of a business process, the method including monitoring and controlling the service parameters by monitoring and controlling component parameters of the network components, wherein the component parameters are mapped to the service parameters.

6. The method of claim 5, wherein the mapping is performed by one or more of:
rule-based reasoning;
model-based reasoning;

state-transition graph based reasoning;
code book based reasoning;
neural network based reasoning;
fuzzy logic based reasoning;
5 look-up table;
Petri nets;
genetic algorithms.

7. A system for determining a state of a service, the service being composed of
10 network components, and the service affecting operation of a business process, the system comprising:

agents for monitoring and determining a state of one or more of the network components.

8. The system of claim 7, comprising:

a correlator for receiving the state of the one or more network components and correlating the same to determine a net state, at a designated time, of the service.

9. The system of claim 8, comprising:

20 a scheduler for implementing an intended degradation of the state of one or more of the network components and communicating the intended degradation to the correlator.

10. The system of claim 7, wherein the state comprises at least one of:

- 25 (a) fault;
(b) performance;
(c) reliability;
(d) availability;
(e) integrity;
30 (f) configuration; and
(g) security.

11. The system of claim 8, wherein each monitoring agents correlates events to alarms for its respective network components.

12. The system of claim 11, wherein the correlator receives alarms from the
5 monitoring agents.

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